

Appendix A



Karen Terwilliger/TCI

Refuge shorebird nesting area

Species of Conservation Concern at Nantucket National Wildlife Refuge

Table A.1. Bird Species of Conservation Concern Known or Suspected on the Refuge.

Species	Federal Legal Status ¹	MA Legal Status ¹	MA CWCS ²	Rarity Rank ³	BCC 2008 ⁴	BCC National ⁵	BGR 30 ⁶	PIF ⁷	NAWCP ⁸	NAWMP ACJV ⁹	MANEM ¹⁰	US SCP ¹¹	Status ¹²	LCC Representative Species ¹³
American oystercatcher		X	S2	X	X	Highest	IA					4	B	X
Black tern			S2N				Moderate						M	
Canada goose (Atlantic)					Highest								W	
Canada goose (North Atlantic)					High									
Common eider		X				High							W	X
Common tern	SC	X	S3			Moderate							B, M	X
Dunlin					X	High							M	
Herring gull			S3S4B										High *	
Least sandpiper							Moderate						B	
Least tern	SC	X	S3	X	X	High							M	
Northern harrier	T	X	S1										B	
Piping plover	T	T	X	S2			Highest	IA					B	X
Roseate tern	E	E	X	S2			Highest	IV	High				H B, M	
Sanderling			X										M	
Semipalmated plover													M	
Semipalmated sandpiper													M	X
Short-billed dowitcher			X	SNA	X	X							M	

Species of Conservation Concern at Nantucket National Wildlife Refuge

¹Federal and State Legal Status Codes (under Federal & State Endangered Species Acts)

E = Federal or State Endangered T= Federal or State Threatened SC= State species of Special Concern (Administrative category without legal standing) PT = Proposed Threatened PE= Proposed Endangered PN= Proposed None PTB= Proposed threatened (breeding only) PEB= Proposed Endangered (breeding only)

²Massachusetts Comprehensive Wildlife Conservation Strategy (CWCS): Species of greatest conservation concern (SGCN) (MA DFW 2006)

³Massachusetts Natural Heritage Inventory Rarity Ranks (MA DFW 2006, NatureServe 2009)

S1 = Critically imperiled

S2 = Imperiled

S3 = Either very rare or uncommon, vulnerable

S4 = Widespread, abundant, apparently secure

S5 = Secure

SH = Historical

SX = Presumed extirpated

B = Breeding

N = Non-breeding

Species included in table only if Srank less than S3

⁴Birds of Conservation Concern (BCC) 2008 (Bird Conservation Region 14 List) (USFWS 2008)

⁵Birds of Conservation Concern (BCC) National List (USFWS 2008)

⁶BCR 30: New England / Mid-Atlantic Coast Conservation Priority Category (Steinkamp 2006)

Highest Priority: High BCR Concern and High BCR Responsibility and (High or Moderate Continental Concern)

High Priority: High Continental Concern and Moderate BCR Responsibility OR Moderate BCR Concern and High BCR Responsibility

Moderate Priority: Moderate BCR Concern and Moderate BCR Responsibility OR High Continental Concern and Low BCR Responsibility OR High BCR Responsibility and Low BCR Concern

⁷Partner's in Flight (PIF) Bird Conservation Plan for Southern New England: Physiographic Area 09 (Dettmers and Rosenberg 2000)

IA = High continental concern & high regional responsibility

IB = High continental concern & low regional responsibility

IIA = High regional concern

IIB = High regional responsibility

III = Additional Federal-listed

IV = Additional State-listed

⁸North American Waterbird Conservation Plan (NAWCP) Categories of Conservation Concern (Kushlan et al. 2002)

Highly Imperiled: includes all species with significant population declines and either low populations or some other high risk factor.

High Concern: Species that are not Highly Imperiled. Populations of these species are known or thought to be declining, and have some other known or potential threat as well.

Moderate Concern: Species that are not Highly Imperiled or High Concern. Populations of these species are either a) declining with moderate threats or distributions; b) stable with known or potential threats and moderate to restricted distributions; or c) relatively small with relatively restricted distributions.

Species included in table only if greater than moderate

⁹North American Waterfowl Management Plan (NAWMP), Atlantic Coast Joint Venture (ACJV) (ACJV 2008)

Conservation Tier Priorities = Highest, High, Moderately High, Moderate, Moderately Low, Low

Species included in table only if priority moderate or higher

¹⁰Mid-Atlantic / New England / Maritimes (MANEM) Regional Waterbird Conservation Plan Priorities (MANEM 2006a, 2006b)

* = MANEM Focal Species for Southern New England

Highly Imperiled: includes all species with significant population declines and either low populations or some other high risk factor.

High Concern: Species that are not Highly Imperiled. Populations of these species are known or thought to be declining, and have some other known or potential threat as well.

Moderate Concern: Species that are not Highly Imperiled or High Concern. Populations of these species are either a) declining with moderate threats or distributions; b) stable with known or potential threats and moderate to restricted distributions; or c) relatively small with relatively restricted distributions.

Species included in table only if greater than moderate

¹¹U.S. Shorebird Conservation Plan (US SCP) Codes (Brown et al. 2001, Clark and Niles 2000)

5 = Highly imperiled

4 = Species of high concern

3 = Species of moderate concern

2 = Species of low concern

1 = Species not at risk

Species included in table only if greater than 3

¹²Status

B = Breeds on refuge or adjacent peninsula

HB = Historically bred on refuge

UB = Suspected but unconfirmed breeding on refuge

M = Uses refuge or adjacent peninsula during migration

W = Uses refuge, adjacent peninsula or waters during winter

¹³Representative Species for the North Atlantic Landscape Conservation Cooperative, USFWS 2012

Table A.2. Mammal Species of Conservation Concern Known or Suspected on the Refuge.

Species	Federal Legal Status ¹	MA Legal Status ¹	MA CWCS ²	MA Rarity Rank ³	MMPA ⁴
Gray seal					X
Harbor seal					X

¹ Federal and State Legal Status Codes (under Federal & State Endangered Species Acts)

E = Federal or State Endangered T= Federal or State Threatened SC= Federal or State species of Special Concern (Administrative category without legal standing) PT= Proposed Threatened PE= Proposed Endangered PN= Proposed None PTB= Proposed threatened (breeding only) PEB= Proposed Endangered (breeding only)

² Massachusetts Comprehensive Wildlife Conservation Strategy: Species of greatest conservation concern

³ Massachusetts Natural Heritage Inventory Rarity Ranks

S1 = Critically imperiled

S2 = Imperiled

S3 = Either very rare or uncommon, vulnerable

S4 = Widespread, abundant, apparently secure

S5 = Secure

SH = Historical

B = Breeding

N = Non-breeding

Species included in table only if Srank less than S3

⁴ Marine Mammal Protection Act Protection

X = Species protected under the Federal Marine Mammal Protection Act

D = Marine mammals designated as depleted under the MMPA

Table A.3. Fish Species of Conservation Concern Known or Suspected on the Refuge.

Species	Federal Legal Status ¹	MA Legal Status ¹	MA CWCS ²	MA Rarity Rank ³	AFS Status ⁴	Fishery Protection ⁵
Snowy grouper					V	
Thorny skate	SC				V	
Alewife			X	S3S4		MSFMCA
American eel			X	S3S4		MSFMCA, AFCA, ACFMA
American shad			X	S3S4		MSFMCA, AFCA, ACFMA
Atlantic salmon	E		X	S1	E	MSFMCA, AFCA
Blueback herring			X	S3S4		MSFMCA, AFCA
Bluefish						MSFMCA
Rainbow smelt	SC			S3		MSFMCA, AFCA
Shortnose sturgeon	E	E	X	S1	E, T, CD	MSFMCA, AFCA
Striped bass						MSFMCA, AFCA, ACFMA
White perch						AFCA
Winter flounder						MSFMCA

¹ Federal and State Legal Status Codes (under Federal & State Endangered Species Acts)

E = Federal or State Endangered T = Federal or State Threatened SC = Federal or State species of Special Concern (Administrative category without legal standing) PT = Proposed Threatened PE = Proposed Endangered PN = Proposed None
 PTB = Proposed threatened (breeding only) PEB = Proposed Endangered (breeding only)

² Massachusetts Comprehensive Wildlife Conservation Strategy: Species of greatest conservation concern³ Massachusetts Natural Heritage Inventory Rarity Ranks

S1 = Critically imperiled

S2 = Imperiled

S3 = Either very rare or uncommon, vulnerable

S4 = Widespread, abundant, apparently secure

S5 = Secure

SH = Historical

B = Breeding

N = Non-breeding

*Species included in table only if Srank less than S3*⁴ American Fisheries Society (AFS) Marine, Estuarine and Diadromous Fish Stocks at Risk of Extinction (Musick et al. 2000)

E = Endangered

T = Threatened

V = Vulnerable

CD = Conservation Dependent

*Species with more than one status listed reflect different rankings for distinct population segments*⁵ Protection under Federal fishery management laws

MSFMCA = Species protected under the Federal Magnuson-Stevens Fishery Management Conservation Act

AFCA = Species protected under the Federal Anadromous Fish Conservation Act

ACFMA = Atlantic Coastal Fisheries Cooperative Management Act

Table A.4. Plant Species of Conservation Concern Known or Suspected on the Refuge.

Species	Federal Legal Status ¹	MA Legal Status ¹	MA Rarity Rank ²
Seabeach knotweed		SC	S3

¹Federal and State Legal Status Codes (under Federal & State Endangered Species Acts)

E = Federal or State Endangered T= Federal or State Threatened SC= State species of Special Concern (Administrative category without legal standing) PT = Proposed Threatened PE= Proposed Endangered PN= Proposed None
PTB= Proposed threatened (breeding only) PEB= Proposed Endangered (breeding only)

²Massachusetts Natural Heritage Inventory Rarity Ranks

S1 = Critically imperiled

S2 = Imperiled

S3 = Either very rare or uncommon, vulnerable

S4 = Widespread, abundant, apparently secure

S5 = Secure

SH = Historical

B = Breeding

N = Non-breeding

Species included in table only if rank less than S3

Table A.5. Plant Communities of Conservation Concern Known or Suspected on the Refuge.

Massachusetts Community Type	MA CWCS¹	MA Natural Heritage Inventory State Rarity Rank²
Maritime Beach Strand	Coastal Dunes, Beaches and Small Islands	S3
Maritime Dune	Coastal Dunes, Beaches and Small Islands	S2

¹Massachusetts Comprehensive Wildlife Conservation Strategy: Habitats of greatest conservation concern

²Massachusetts Natural Heritage Inventory Rarity Ranks

S1 = Critically imperiled

S2 = Imperiled

S3 = Either very rare or uncommon, vulnerable

S4 = Widespread, abundant, apparently secure

S5 = Secure

SH = Historical

Communities included in table only if Srank less than S3

Literature Cited

- Atlantic Coast Joint Venture (ACJV). 2008. Draft North American Waterfowl Management Plan, Atlantic Coast JointVenture, Waterfowl Implementation Plan, Revision June 2005. Hadley, MA. 529 p. + appendices. Available at: <http://www.acjv.org/planning.htm>.
- Brown, S., C. Hickey, B. Harrington and R. Gills, eds. 2001. The U.S. shorebird conservation plan. 2nd Ed. Manomet, Massachusetts: Manomet Center for Conservation Sciences. 60 p. Available online at: <http://www.manomet.org/USSCP/files.htm>.
- Clark, K.E., and L.J. Niles. 2000. Northern Atlantic Regional Shorebird Plan. Version 1.0. Northern Atlantic Shorebird Habitat Working Group. Woodbine, NJ. 28 p.
- Dettmers, R. and K.V. Rosenberg. 2000. Partners In Flight Bird Conservation Plan for The Southern New England (Physiographic Region 09), version 1.0. American Bird Conservancy, Ithaca, NY. 52 p. Available at: http://www.partnersinflight.org/bcps/pl_09sum.htm.
- Kushlan J.A., M.J. Steinkamp, K.C. Parsons, J. Capp, M. Acosta Cruz, M. Coulter, I. Davidson, L. Dickson, N. Edelson, R. Elliot, R.M. Erwin, S. Hatch, S. Kress, R. Milko, S. Miller, K. Mills, R. Paul, R. Phillips, J.E. Saliva, B. Sydeman, J. Trap, J. Wheeler, and K. Wohl. 2002. North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, D.C. Available at: <http://www.waterbirdconservation.org/nawcp.html>.
- Massachusetts Division of Fisheries and Wildlife. 2006. Massachusetts Comprehensive Wildlife Conservation Strategy. Department of Fish and Game, Executive Office of Environmental Affairs. 791 p. Available at: http://www.mass.gov/dfwele/dfw/habitat/cwcs/pdf/mass_cwcs_final.pdf.
- Mid-Atlantic / New England / Maritimes (MANEM) Waterbird Working Group. 2006a. Waterbird Conservation Plan for the Mid-Atlantic/New England/Maritimes Region: 2006-2010. Waterbird Conservation for the Americas. Available at: <http://www.pwrc.usgs.gov/nacwcp/manem.html>.
- Mid-Atlantic / New England / Maritimes (MANEM) Waterbird Working Group. 2006b. Draft Mid-Atlantic / New England / Maritimes Waterbird Conservation Plan: Species Profiles. Waterbird Conservation for the Americas. Available at: <http://www.fws.gov/birds/waterbirds/MANEM/Species%20Profiles.htm>.
- Musick, J.A., M.M. Harbin, S.A. Berkeley, G.H. Burgess, A.M. Eklund, L. Findley, R.G. Gilmore, J.T. Golden, D.S. Ha, G.R. Huntsman, J.C. McGovern, S.J. Parker, S.G. Poss, E. Sala, T.W. Schmidt, G.R. Sedberry, H. Weeks, and S.G. Wright. 2000. Marine, Estuarine and Diadromous Fish Stocks at Risk of Extinction in North America (Exclusive of Pacific Salmonids). *Fisheries* 25(11):6-30.
- NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available at: <http://www.natureserve.org/explorer>. (Accessed: May 20, 2009).
- Partners in Amphibian and Reptile Conservation (PARC). 2004. Draft National State Wildlife Agency Herpetological Conservation Report. 131 p. Available at: <http://www.parcplace.org/documents/PARCNationalStates2004.pdf>.

- Steinkamp, M. 2006. Draft Mid-Atlantic / Southern New England Bird Conservation Region (BCR 30) Implementation Plan. Atlantic Coast Joint Venture. 60 p. Available at: <http://www.acjv.org/resources.htm>.
- U.S. Army Corps of Engineers. 2005. Threatened, Endangered and Sensitive Species Protection and Management System: Massachusetts. Environmental Library, Engineer Research and Development Center, Vicksburg, MS. Available at: <http://el.erdc.usace.army.mil/tessp/species.cfm?Type=State&Code=Massachusetts>. (Accessed: June 5, 2009).
- U.S. Fish and Wildlife Service. 2008. Birds of conservation concern 2008. Division of Migratory Bird Management, Arlington, VA.
- U.S. Fish and Wildlife Service. 2012. Identifying Representative Species for the North Atlantic Landscape Conservation Cooperative. Available at: http://www.northatlanticlcc.org/rep_species.html (Accessed: March 9, 2012).
- Waterbird Conservation for the Americas. 2006. Conservation Status and Distribution of Solitary-Nesting Waterbird Species. [A Species-level Categorization Relative to All Waterbirds and Derived Within the Spatial Context of the NAWCP Area.] Washington, D.C. Available at: http://www.waterbirdconservation.org/pdfs/status_assessment/FinalStatusandDistributionMarshbirdsTable.pdf.